

Title (en)
Method for treating exhaust gases

Title (de)
Verfahren zur Behandlung von Abgasen

Title (fr)
Procédé de traitement des effluents gazeux

Publication
EP 0815921 A1 19980107 (FR)

Application
EP 97420106 A 19970703

Priority
FR 9608643 A 19960705

Abstract (en)
Treatment of gaseous effluents is carried out by using a counter-current wash with a basic solution containing dispersed carbon black particles which are polarised by contact with electrode pairs in the path of the gaseous effluents. Also claimed is an installation for implementation of the process. The carbon black absorbs and concentrates within its pores the organic molecules in the gaseous effluent, bringing them into contact with the polarised electrodes. The compounds are oxidised at the anodes, e.g. sulphur to sulphates, and released O₂ is adsorbed on the carbon and transported to the cathodes where reduction to H₂O₂ takes place. The basic wash solution is a carbonate buffer solution. The electrodes are of titanium coated with a thin layer of platinum or oxides of noble metals. Non-conductive spacers are also incorporated between the electrodes. The distance between the anode and cathode of one pair is smaller than the separation between the pairs of electrodes. The inter-electrode distance is about 3 - 5 mm.

Abstract (fr)
Dans le procédé et le dispositif de traitement des effluents gazeux, par exemple, des effluents gazeux de cuisine, on procède à un lavage à contre-courant de ces effluents à l'aide d'une solution basique contenant du noir de carbone dispersé, ce noir de carbone étant polarisé par contact avec des électrodes sous tension situées sur le passage de l'effluent gazeux. Il s'agit en quelque sorte d'un lavage électrolytique en présence de noir de carbone. <IMAGE>

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Citation (search report)
• [DXA] DE 4105214 A1 19920827 - BISCHOFF GASREINIGUNG [DE]
• [A] US 3824163 A 19740716 - MAGET H
• [X] FR 2619022 A1 19890210 - BELIN CHRISTIAN [FR]
• [A] GB 2147525 A 19850515 - BISCHOFF GASREINIGUNG
• [A] US 3960505 A 19760601 - MARKS ALVIN M
• [X] PATENT ABSTRACTS OF JAPAN vol. 011, no. 242 (C - 438) 7 August 1987 (1987-08-07)

Cited by
CN102732328A; ITRM20110665A1; WO2013088391A1

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